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中国含笑属新植物

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SOME NEW TAXA OF MICHELIA FROM CHINA

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关键词 球花含笑；长柄含笑；鼠刺含笑；黄花含笑；石灰含笑；多脉含笑；素黄含笑；长柱含笑

Key words *Michelia sphaerantha*; *M. longipetiolata*; *M. iteophylla*; *M. xanthantha*; *M. calcicola*; *M. polyneura*; *M. flaviflora*; *M. longistyla*

球花含笑 新种 图1

Michelia sphaerantha C. Y. Wu, sp. nov.

Species *M. foveolatae* Merr. ex Dandy simillima, sed differt ramulis petiolisque sparse pilosis, foliis subtus subglabris vel pubescentibus, floribus albis.

Arbor 8—16 m alta, gemmis cylindricis, circ. 1.3 cm longis, brunneo-tomentosis, ramulis fusco-brunneis vel flavo-brunneis, sparse pilosis et lenticellatis. Folia coriacea, oblonga vel late oblonga, 16—20 cm longa, 8.5—10.5 cm lata, apice cuspidata basi rotundata vel obtusa, supra glabra, subtus subglabra vel pubescentia; costa media supra impressa, nervis lateralibus utrinsecus 9—12, nervulis dense reticulatis in sicco utrinque prominulis; petioli ecicatricati, pilosi, 2—2.5 cm longi, stipulis a petiolo liberis. Pedicelli circ. 1 cm longi, hispidi; perianthia alba, tepalis 12, subsimilibus, anguste obovatis, 6—7.5 cm longis, 1—2.5 cm latis; stamina numerosa, circ. 2 cm longa, antheris circ. 1.5 cm longis, connectivum ultra antherae loculos in appendicem brevem acutam longam productum filamentibus circ. 5 mm longis; gynoecium cylindricum circ. 3 cm longum, pubescens, gynophoro circ. 1 cm longo, pubescentibus, pistillo numeroso, circ. 6 mm longo, stylo circ. 2.2 mm longo, carpello ovato circ. 3.8 mm longo. Fructus apocarpus 19—24 cm

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longus, carpellis maturis liberis dehiscentibus, ovatis fusco-brunneis, lenticellis albidis.

云南(Yunnan)：景东(Jingdong)，海拔2110米，1939年12月20日，李鸣冈（M. K. Li）2539（模式 holotypus KUN）；同地点，1940年3月20日，李鸣冈3561；屏边(Pingbian)，海拔1100米，1953年7月28日，毛品一（Mao P. I）2728，1954年3月27日，毛品一（Mao P. I）3621。

本种与金叶含笑*M. foveolata* Merr.相似，但本种的小枝、叶柄散生柔毛，叶背近无毛或被短柔毛，花白色而不同。

长柄含笑 新种 图2

Michelia longipetiolata C. Y. Wu, sp. nov.

Species *M. chapensi* Dandy simillima sed differt gemmis dense rubro-pilosis, foliis late oblanceolatis vel anguste obovatis 7.5--10.5 cm longis, nervulis reticulatis inconspicuis, petiolis 2.5—3 cm longis.

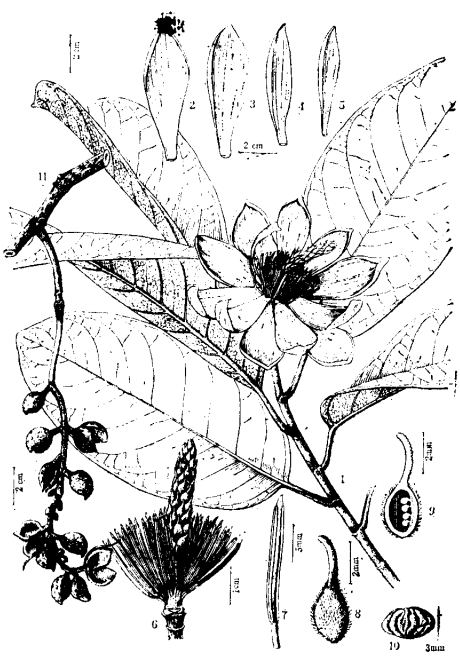

图1 球花含笑 *Michelia sphaerantha* C. Y. Wu
1.花枝；2—5花被片；6.花去花被片示雄蕊群和雌蕊群；7.雄蕊；8—9雌蕊；10.种子；11.果枝。（邓盈丰绘）

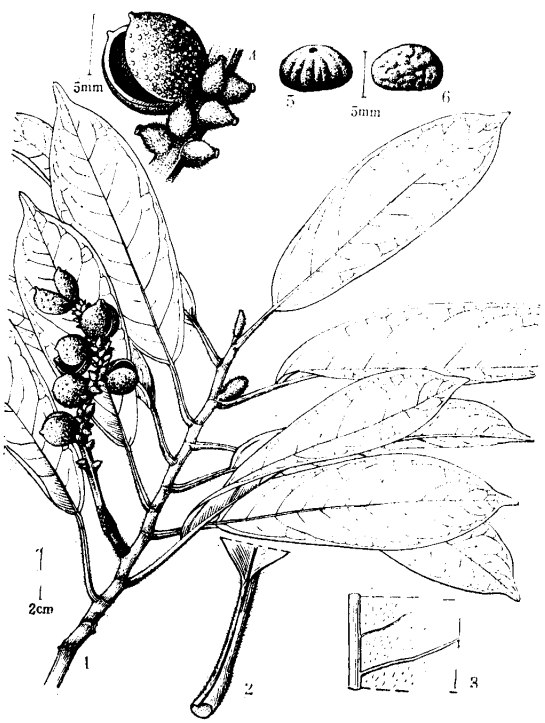

图2 长柄含笑*Michelia longipetiolata* C. Y. Wu
1.果枝；2.叶柄放大；3.叶背部分放大；4.聚合果部分放大示成熟心皮；5—6种子。（邓盈丰绘）

Arbor parva circ. 15 m alta, trunco 30 cm diam, gemmis ovatis circ. 1 cm longis, dense rubro-pilosis, ramulis juvenilibus et petiolis sparse pilosis. Folia tenuiter coriacea late oblanceolata vel anguste obovata 7.5—10.5 cm longa, 2.8—3.8 cm

lata, apice breviter acuta, basi cuneata vel late cuneata, in statu juvenili utrinque pilosa; costa media supra plana vel leviter prominula, nervis lateralibus utrinsecus 6—10, nervulis reticulatis inconspicuis, petiolis 2.5—3 cm longis, ecicatricatis, stipulis a petiolo liberis. Flores ignoti. Fructus apocarpus 7—9 cm longus, pedicello fructifero circ. 3 mm longo; gynophorum in fructu 1—1.5 cm longum, carpellis rudimentalibus circ. 20, carpellis maturis 7—10, ovatis, circ. 12 mm longis, 9 mm latis, atro-brunneis lenticellis, liberis dehiscentibus; regio cicatricum staminalium circ. 8 mm longa.

湖南 (Hunan)：道县 (Dao Xian)，千家洞，海拔1000米，南岳树木园 (Nanyue Shumu Yuan) 7274；83731；贵州 (Guizhou)：毕节(Bijie)，山谷密林中，海拔1500米，1957年9月4日，禹平华 (Yu Pinghua) 251（模式holotypus，PE）。

本种与乐昌含笑*M. chapensis* Dandy相似，但本种的芽密被红色柔毛；叶宽倒披针形或狭倒卵形，长7.5—10.5厘米，网脉不明显，叶柄长2.5—3厘米等特征，易于区别。

鼠刺含笑　新种　图3

Michelia iteophylla C. Y. Wu, sp. nov.

Species *M. mediocri* Dandy simillima, sed folliis ellipticis vel anguste ellipticis, 1.7—2.3 cm lata, subtus glabris, gynoeciis ovatis, circ. 6 mm longis, gynophoris 3—6 mm longis differt.

Arbor parva circ. 8 m alta, gemmis cylindricis, circ. 1.4 cm longis, brunneo-tomentulosis, ramulis brunneis vel flavo-brunneis glabris, sparse lenticellatis. Folia coriacea, elliptica vel anguste elliptica, 7—10 cm longa, 1.7—2.3 cm lata, apice acuminata, basi cuneata, utrinque glabra; costa media supra leviter impressa, nervis lateralibus utrinsecus 11—15, nervulis dense reticulatis in sicco utrinque prominulis; petioli ecicatricati 0.8—1.2 cm longi, stipulis a petiolo liberis. Pedicelli 6—7 mm longi, glabri vel juventute hispidi; perianthia alba, fragrantia, tepalis 9, subsimilibus, anguste obovatis, circ. 2.8 cm longis, 0.8—1 cm latis; stamina numerosa, circ. 7 mm longa, antheris circ. 5 mm longis, connectivum ultra

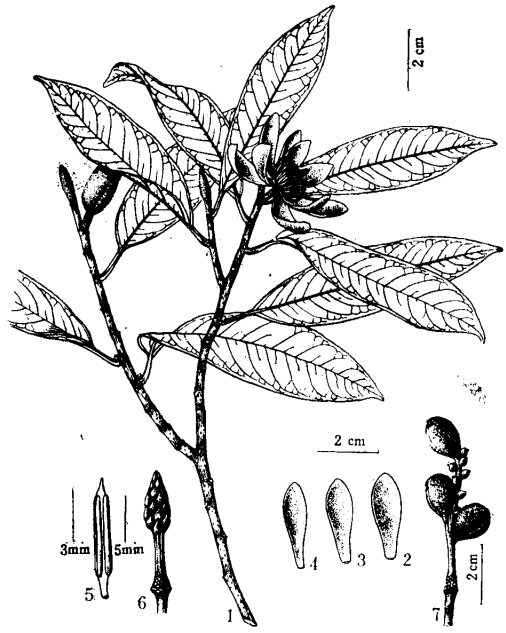

图3　鼠刺含笑*Michelia iteophylla* C. Y. Wu
1.花枝；2—4.花被片；5.雄蕊；6.雌蕊群；7.聚合果。（邓盈丰绘）

antherae loculos in appendicem (circ. 1 mm longo) brevem acutam productum, filamentibus circ. 1 mm longis; gynoecium ovatum, circ. 6 mm longum, minute hispidum gynophoro circ. 6 mm longo, minute hispido, pistillo numeroso, circ. 2 mm longo, stylo circ. 0.2 mm longo, carpello ovato circ. 1.8 mm longo, minute hispido. Fructus apocarpus 5—7 cm longus, carpellis maturis liberis dehiscentibus, ovatis fusco-brunneis lenticellis albidis.

云南 (Yunnan)：金平 (Jinping)，海拔1650米，1958年12月4日，Lo 1359（模式holotypus. KUN）。

本种与白花含笑 *M. mediocris* Dandy 相似，但本种的叶椭圆形或狭椭圆形，宽1.7—2.3厘米，背面无毛，雌蕊群卵形，长约6毫米，雌蕊群柄长3—6毫米等特征不同。

黄花含笑 新种 图4

Michelia xanthantha C. Y. Wu, sp. nov.

Species *M. polyneurae* C. Y. Wu simillima sed differt pedicellis glabris, tepalis 6, flavis, gynoeciis dense cinereo-pubescentibus.

Arbor 30 m alta, trunco 100 cm diam; gemmis cylindricis, circ. 1.5 cm longis, glabris, ramulis fusco-brunneis vel cinereo-flavis, circ. 4.5 mm diam, sparse lenticellatis. Folia tenuiter coriacea, oblonga vel obovato-oblonga, 15—17 cm longa, 6.2—7.5 cm lata, apice breviter cuspidata, basi cuneata vel rotundata, utrinque glabra, costa media supra leviter impressa, subtus prominula, nervis lateralibus utrinsecus 11—18, nervulis reticulatis utrinque prominulis, petiolis 2—2.5 cm longis ecicatricatis, stipulis a petiolo liberis. Pedicelli circ. 1.5 cm longi, glabri; perianthia flava, fragrantia, 2-cycla, tepalis 6, similibus, anguste oblongis vel late oblanceolatis, 4—5.5 cm longis, 1—1.5 cm latis; stamina 2.3—2.5 cm longa, anthera 1.8—2 cm longa, connectivum ultra antherae loculos in appendicem brevem acutam (circ. 1—2 mm longum) productum; gynoecium cylindricum, 1.8—2 cm longum, dense cinereo-pubescens; gyno-phorcum 2—3 mm longum; carpella numerosa, ovata, dense cinereo-pubescentia 3—4 mm longa; stigma brunnea circ. 1 mm longa.

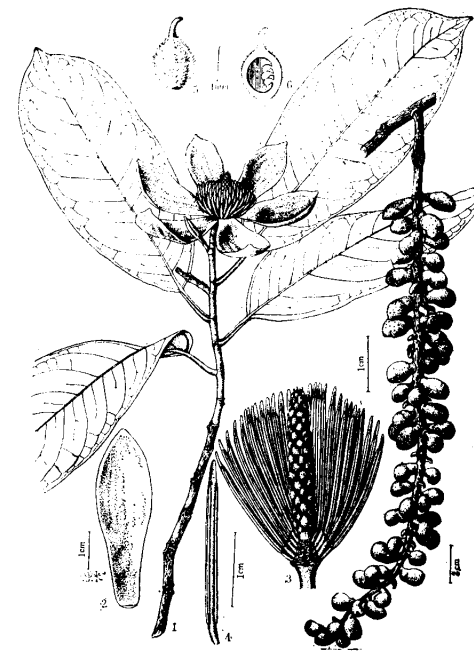

图4 黄花含笑 *Michelia xanthantha* C. Y. Wu
1.花枝；2.花被片；3.花去花被片示雄蕊群和雌蕊群；4.雄蕊；5—6.雌蕊；7.果枝。（邓盈丰绘）

Fructus apocarpus pendulus, circ. 21 cm longus; carpellis maturis fusco-brunneis, sparse lenticellatis.

云南（Yunnan）：西双版纳（Xishuangbanna），勐海，金俊山，海拔1350米，阴处林中，1957年3月6日，中苏考察团7046（模式holotypus KUN）。

本种与多脉含笑 *M. polyneura* C. Y. Wu 相近缘，但本种的花梗无毛，花被片6片，黄色；雌蕊群密被灰色短柔毛，可以区别。

石灰含笑　新种　图5：9—16

Michelia calcicola C. Y. Wu, sp. nov.

Species *M. foveolatae* Merr. ex Dandy simillima sed differt gemmis flavo-tomentosis, foliis subtus appressis villosis, tepalis oblongis vel obovato-oblongis, 4—4.5 cm longis, 1—1.5 cm latis, gynoecio subglabro.

Arbor parva 2—5 m alta; gemmis cylindricis vel anguste ovoidis, 2.5—3.5 cm longis, flavo-tomentosis, ramulis juvenilibus flavo-tomentosis, ramulis vetustis atro-brunneis, 5—7 mm diam, sparse lenticellatis. Folia coriacea, oblonga vel oblongo-ovata, 13—18 cm longa, 4.5—7 cm lata, apice acuminata vel acuta, basi cuneata vel rotundata, utrinque primo appressa villosa, in senectute glabrescentia, subtus interdum glauca, costa media supra impressa, nervis lateralibus utrinsecus 13—17, petiolis ecicatricatis, 1.5—3 cm longis, juventute tomentosis senectute glabrescentibus; stipulis a petiolo liberis. Pedicelli circ. 1 cm longi, dense flavo-tomentosi; perianthia flava, 3-cycla, tepalis 9, subsimilibus, oblongis vel obovato-oblongis, 4—4.5 cm longis, 1—1.5 cm latis; stamina circ. 60, 20—24 mm longa, filamenta 4—5 mm longa, anthera 15—17 mm longa, connectivum ultra antherae loculos in appendicem brevem acutam (circ. 0.8—1 mm longum) productum; gynoecium cylindricum, circ. 2 cm longum, subglabrum; gynophorum circ. 6 mm longum, carpellis nume-

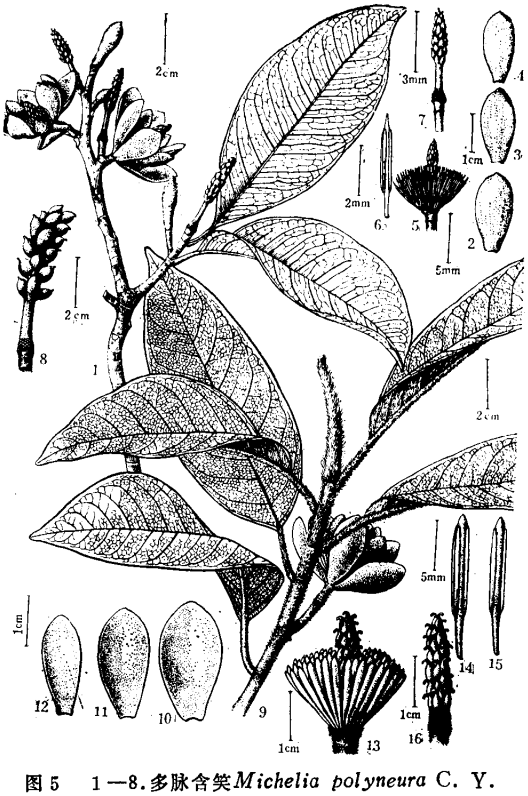

图5　1—8.多脉含笑 *Michelia polyneura* C. Y. Wu 1.花枝；2—4.花被片；5.花去花被示雄蕊群和雌蕊群；6.雄蕊；7.雌蕊群；8.聚合果。9—16.石灰含笑 *Michelia calcicola* C. Y. Wu 9.花枝；10—12.花被片；13.花去花被片示雄蕊群和雌蕊群；14—15.雄蕊；16.雌蕊群。（邓盈丰绘）

rosis, liberatis, ovatis, circ. 3—4 mm longis, glabris, stylis brunneis, 1.5—2 mm longis. Fructus apocarpus cylindricus 9—10 cm longus, carpellis maturis liberis dehiscentibus, oblongis, 1.5—1.7 cm longis, 1 cm latis, breviter rostratis.

云南（Yunnan）；广南（Guangnan），海拔1500米，石山，1940年3月11日，王启无（C. W. Wang）87716（模式holotypus KUN）；麻栗坡（Malipo），海拔1200米，王启无（C. W. Wang）87033；同地点，冯国楣（K. M. Feng 12844）；西畴（Xichou），石山山顶林内，武全安（Wu C. A.）8019。广西（Guangxi），龙州（Longzhou），海拔590米，陈少卿（Chen S. C.）13315。

本种与金叶含笑 *M. foveolata* Merr. et Dandy 相近缘，但本种的芽被黄色长绒毛，叶背面被平伏长柔毛，花被片长圆形或倒卵状长圆形，长4—4.5厘米，宽1—1.5厘米，雌蕊群近无毛，可以区别。

多脉含笑 新种 图5：1—8

Michelia polyneura C. Y. Wu, sp. nov.

Species *M. xanthanthae* C. Y. Wu simillima sed differt pedicellis dense flavo-tomentosis, tepalis 9, albis, gynoeciis glabris.

Arbor 10—20 m alta, gemmis cylindricis, dense pubescentibus, ramulis robustis, 5—7 mm crassis, sparse puberulis et lenticellatis. Folia tenuiter coriacea, elliptica vel elliptico-oblonga, 11—15 cm longa, 4—6 cm lata, apice acuminata, basi cuneata vel rotundata, utrinque glabra, costa media supra leviter impressa, subtus prominula, nervis lateralibus utrinsecus 17—20, nervulis reticulatis utrinque prominulis; petioli ecicatricati, 1—1.5 cm longi, supra sulcati; stipulae a petiolo liberae. Pedicelli circ. 2.5 mm longi, dense flavo-tomentoei; perianthia alba, 3-cycla, tepalis 9, subsimilibus, oblongis vel obovato-oblongis, 2.3—3 cm longis, 0.8—1 cm latis; stamina circ. 80, 8—10 mm longa, anthera 4—5 mm longa, connectivum ultra antherae loculos in appendicem brevem acutam (circ. 1.5—2 mm longum) productum; gynoecium cylindricum, 1—1.2 cm longum, glabrum; gynophorum 2—7 mm longum; (in fructu 1.2—1.5 cm longum); carpella numerosa. Fructus apocarpus 3—4 cm longus; carpellis maturis flavo-virentibus dense lenticellatis.

云南(Yunnan)：西畴（Xichou），冯国楣（K. M. Feng）12030（模式holotypus KUN），12464；广南（Guangnan），王启无（C. W. Wang）88023；麻栗坡(Malipo)，王启无（C. W. Wang）86800，86915。

本种与黄花含笑 *M. xanthantha* C. Y. Wu 相近缘，但本种的花梗密被黄色绒毛，花被片9片，白色，雌蕊群无毛，可以区别。

素黄含笑 新种 图6

Michelia flaviflora Law et Y. F. Wu, sp. nov.

Species *M. cavaleriei* Finet et Gagnep. simillima sed differt ramulis juvenilibus et petiolis brunneo-tomentulosis, foliis subtus brunneo-sericeis, tepalis 15,

Arbor circ. 15 m alta, gemmis flavo-tomentosis, ramulis juvenilibus brunneo-tomentulosis, ramulis vetustis sparse lenticellatis. Folia chartacea lancifolia vel anguste elliptica, 15—24 cm longa, 3.6—5.5 cm lata, apice acuminata, basi cuneata, supra viridula, glabra, subtus glauca brunneo-sericea, costa media supra leviter prominula vel plana, nervis lateralibus utrinsecus 16—24; petiolis ecicatricatis, 0.5—1.2 cm longis, tomentulosis, basi leviter crassis; stipulis a petiolo liberis. Pedicellus circ. 1 cm longus, fulvo-tomentosus; perianthium flavidum, tepalis 15, subsimilibus; stamina circ. 90, 1.1—1.5 cm longa, anthera 7—10 mm longa, connectivum ultra antherae loculos in appendicem brevem acutam (circ. 1—2 mm longum) productum. Gynoecium anguste ovoideum circ. 1.2 cm longum; gynophorum circ. 1 cm longum, tomentosum, carpellis numerosis, liberatis, ovatis, circ. 4 mm longis, dense villosis, stylis circ. 2 mm longis. Fructus ignotus.

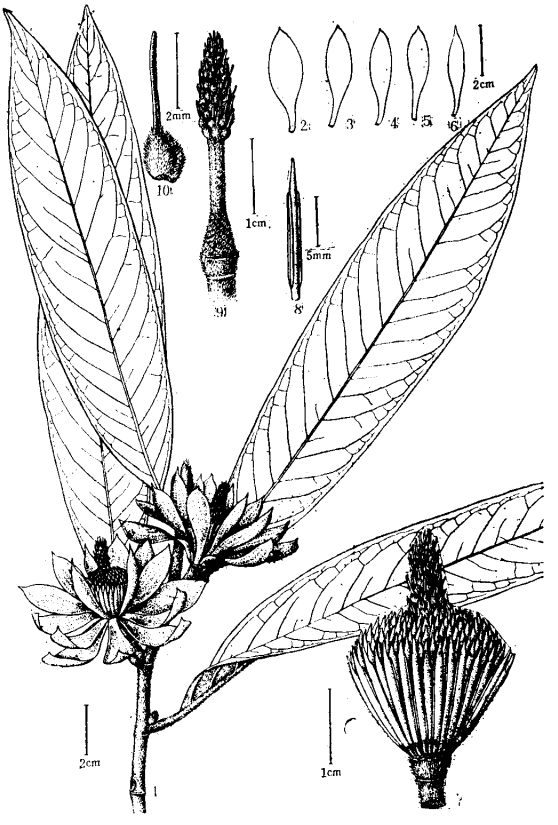

图6　素黄含笑 *Michelia flaviflora* Lau et Y. F. Wu 1.花枝；2—6.花被片；7.雄蕊群及雌蕊群；8.雄蕊；9.花去花被及雄蕊示雌蕊群；10.心皮。（邓盈丰绘）

云南 (Yunnan)：屏边(Pingbian)，大围山，海拔1450米，王孝(Wang H.) 100120（模式holotypus, SCBI）

越南 (Viet Nam)：沙巴 (Sha-ba)，中越考察队 (Exped. Sino-Vietnam) 484。

本种与平伐含笑 *M. cavaleriei* Finet et Gagnep. 相近缘，但本种的嫩枝、叶柄被褐色微绒毛，叶背面被褐色绢毛，花被片15枚，可以区别。

长柱含笑　新种　图7

Michelia longistyla Law et Y. F. Wu, sp. nov.

M. aenea auct. non Dandy: C. Y. Wu et W. T. Wang in Act. Phytotax Sin. 6 (2):193. 1957. quoad specimen 中苏考察队 1524.

Species *M. aeneae* Dandy simillima, sed differt foliis anguste elliptico-oblongis, 4.5—7 cm latis, apice breviter cuspidatis, stylis carpello aequalibus, ovulis circ. 17.

Arbor circ. 12 m alta, trunco 20 cm diam, indumentis appressis, brunneis vel albis, gemmis anguste ovatis 2—5 cm longis, tomentosis, ramulis robustis brunneis

vel fusco-brunneis, 5—10 mm diam, primo tomentosis, in senectute glabrescentibus, sparse lenticellatis. Folia coriacea, anguste elliptico-oblonga, 20—26 cm longa, 4.5—7 cm lata, apice breviter cuspidata, basi late cuneata, supra primo puberula, in senectute glabrescentia, subtus dense pubescentia; costa media supra impressa, nervis lateralibus utrinsecus 15—20, nervulis dense reticulatis, in sicco utrinque prominulis; petioli ecicatricati, 2—3 cm longi, pubescentes, stipulis a petiolo liberatis. Perianthia 4-cycla, tepalis 12, exterioribus obovatis, 2—2.5 cm longis, 0.8—1 cm latis, interioribus anguste ovatis, circ. 2 cm longis, 0.5 cm latis; stamina circ. 80, 13—15 mm longa, antheris 9—10 mm longis, connectivum ultra antherae loculos in appendicem (0.5—1 mm longum) brevem acutam productum, filamentibus 1.5—2 mm longis; gynoecium cylindricum, 8—13 mm longum, pubescens, gynophoro 2—3 mm longo, pubescens, pistillo numeroso, circ. 4 mm longo, stylo circ. 2 mm longo, carpello ovato circ. 2 mm longo.

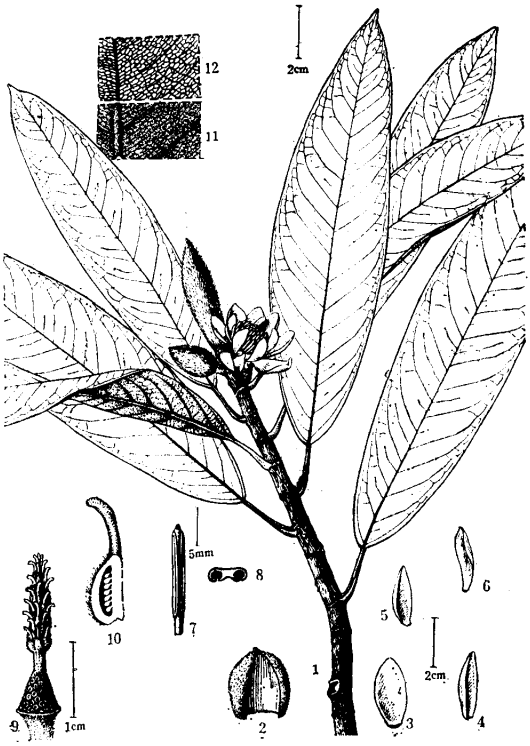

图7 长柱含笑*Michelia longistyla* Law et Y. F. Wu 1.花枝；2.苞片；3—6花被片；7.雄蕊；8.心皮横切面；9.雌蕊群；10.雌蕊纵切面；11.叶背部分放大；12.叶面部分放大。（邓盈丰绘）

云南（Yunnan）：金平（Jinping），海拔2000米，常绿阔叶林中，1958年3月19日，黄全（Wangquan）142(模式holotypus, PE)，中苏考察队1524；马关（Maguan），海拔1800米，刘玉壶等（Law Yuhwu）7036（华南植物研究所）。

本种与铜绿含笑*M. aenea* Dandy近缘，但本种的叶狭椭圆状长圆形，宽4.5—7厘米，先端短骤尖，花柱与心皮等长，胚珠约17颗等不同。